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Why development of new HPLC column technology is still alive

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Abstract

The most common method of HPLC analysis and the approach that most scientists begin with is reversed-phase. Over the years other approaches have been developed but RP methods continue to dominate and in many cases are tested before other more viable chromatographic alternatives are sought out. The answer to this is simple. Everyone seems to understand RP while other modes are often more complex or do not seem worth the effort to try. Even in RP there have been substantial advances in recent years that allow for the analysis of more challenging samples. This presentation will focus on an overview of recently developed and emerging HPLC column technologies that have advanced the use of reversed-phase methods as well as those that have opened the doors to other retention mechanisms that are more suitable for the separation of compounds and samples not amenable to RP analysis. Topics that will be reviewed include solid supports and packing materials, surface modifications and alternative formats to the standard HPLC column.

Biography

Joseph Pesek has a B.S. degree in Chemistry (University of Illinois) and Ph.D. in Analytical Chemistry (UCLA). He is Professor of Chemistry at San Jose State University and was named a Camille and Henry Dreyfus Foundation Scholar in 1993 and in 2001. He had sabbatical leaves in Paris (Georges Guiochon), Marseille (Tony Siouffi), and Melbourne (Milton Hearn). He has over 200 publications, 3 books, 4 patents and made over 200 presentations. He is one of the editors for the Journal of Separation Science. His research interests include the development, characterization and applications of separation materials for chromatographic and electrophoretic processes.